May 20, 2005

Peter Van Alyea
Redwood Oil Company
455 Yolanda Avenue, Suite 200
Santa Rosa, CA 95404

Ground Water Monitoring Report
April 2005
Redwood Oil Service Station #101
4925 Sonoma Highway
Santa Rosa, California
ECM Project # 98-517-14

Dear Mr. Van Alyea:

This report provides the results of semi-annual ground water monitoring at 4925 Sonoma Highway, Santa Rosa, California (Figure 1, Appendix A). On April 19, 2005, ECM personnel visited the site. Ground water elevations were measured and ground water samples were collected from the two monitoring wells (MW-2 and MW-3). Monitoring well MW-1 was abandoned on October 9, 2004, prior to remedial excavation. MW-1 will be replaced and sampling will resume upon completion of site modifications. The well locations are shown on Figure 2 (Appendix A).

Ground water levels were measured in the two monitoring wells. Free-phase hydrocarbons were not observed in any of the wells. Wellheads and well vaults were observed to be in good condition. Water level data is shown in Table 1 (Appendix B) and a ground water elevation map is included as Figure 2 (Appendix A).

Ground water samples were forwarded under chain of custody record to Entech Analytical Labs, Inc., of Santa Clara, California for analysis. Analytical results for ground water are included in Table 2 (Appendix B). Ground water samples were collected in accordance with ECM Standard Operating Procedure - Ground Water Sampling (Appendix E).

The chain of custody document and laboratory analytical reports are included as Appendix C. The water sampling data sheets are included as Appendix D. Purge water and decon rinseate were transported to an ROC holding tank for proper disposal.

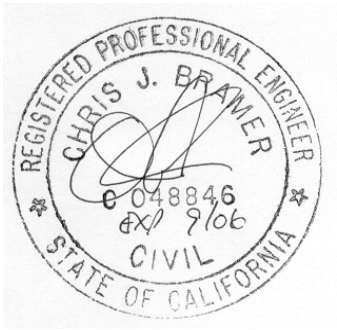
Analytical results for ground water samples collected during this event were consistent with results from prior events for monitoring wells MW-2 and MW-3. No contaminants of concern were detected in the sample from MW-2 for the second consecutive quarter. Contaminant concentrations have continued to decrease from previously high levels in MW-2 and have been low or below detection limits since April, 2002.

Contaminant concentrations in samples from MW-3 have fluctuated between high and low. No correlation between contamination concentration and ground water elevation is apparent. The sample collected during the April 2005 event contained a low concentration of gasoline. No BTEX compounds or MTBE were detected in the sample from MW-3.

Thank you for the opportunity to provide environmental services to you. Please call if you have any questions.

Sincerely,
ECM Group

David Hazard
Environmental Scientist



Chris Bramer
Professional Engineer #C048846

Appendices:
A - Figures
B - Tables
C - Chain of Custody and Laboratory Analytical Reports
D - Water Sampling Data Sheets
E - Standard Operating Procedure

cc: Jo Bentz, North Coast Regional Water Quality Control Board

APPENDIX A
FIGURES

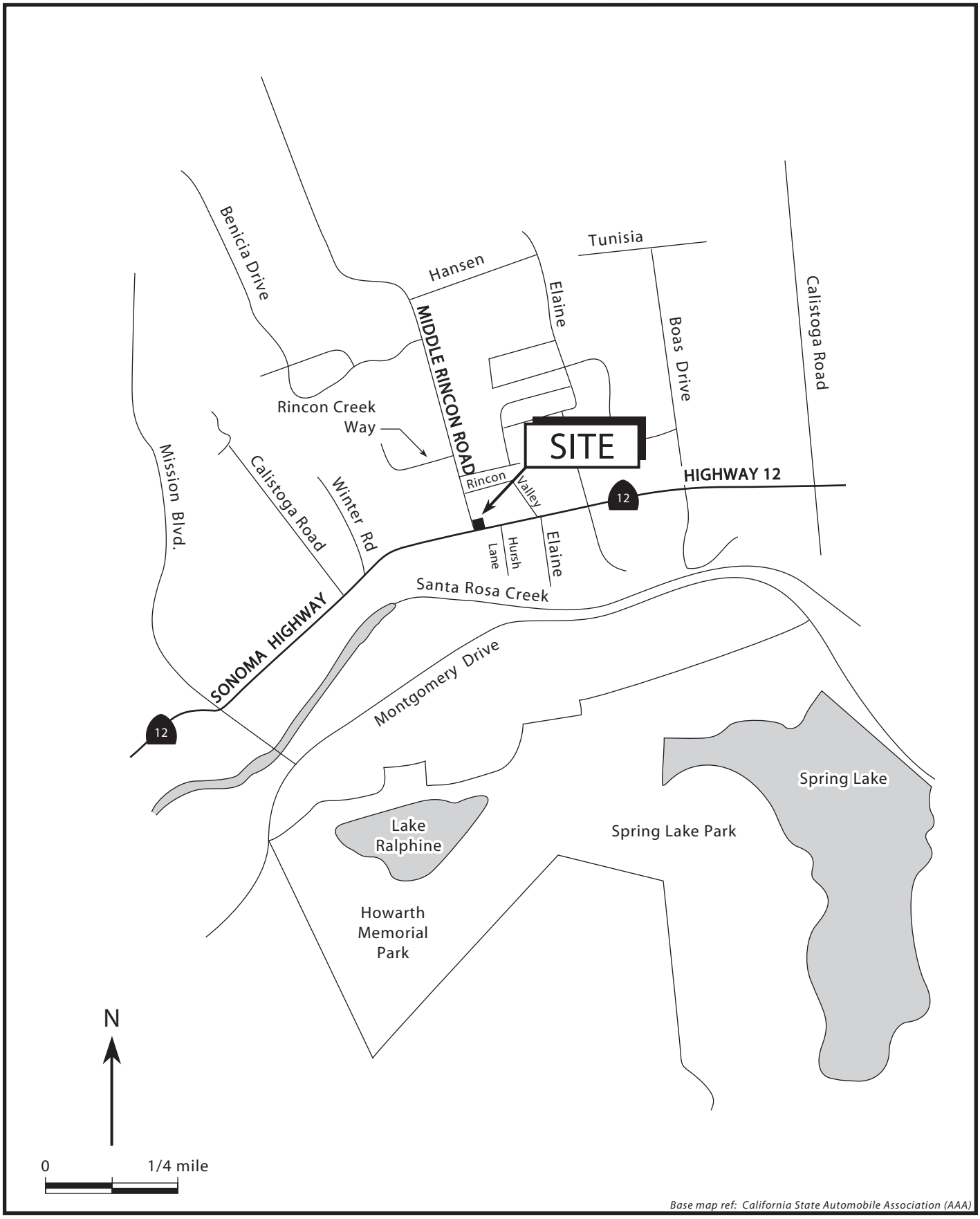


Figure 1. Site Location Map – Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

98-517 [Site Location map] 10-03

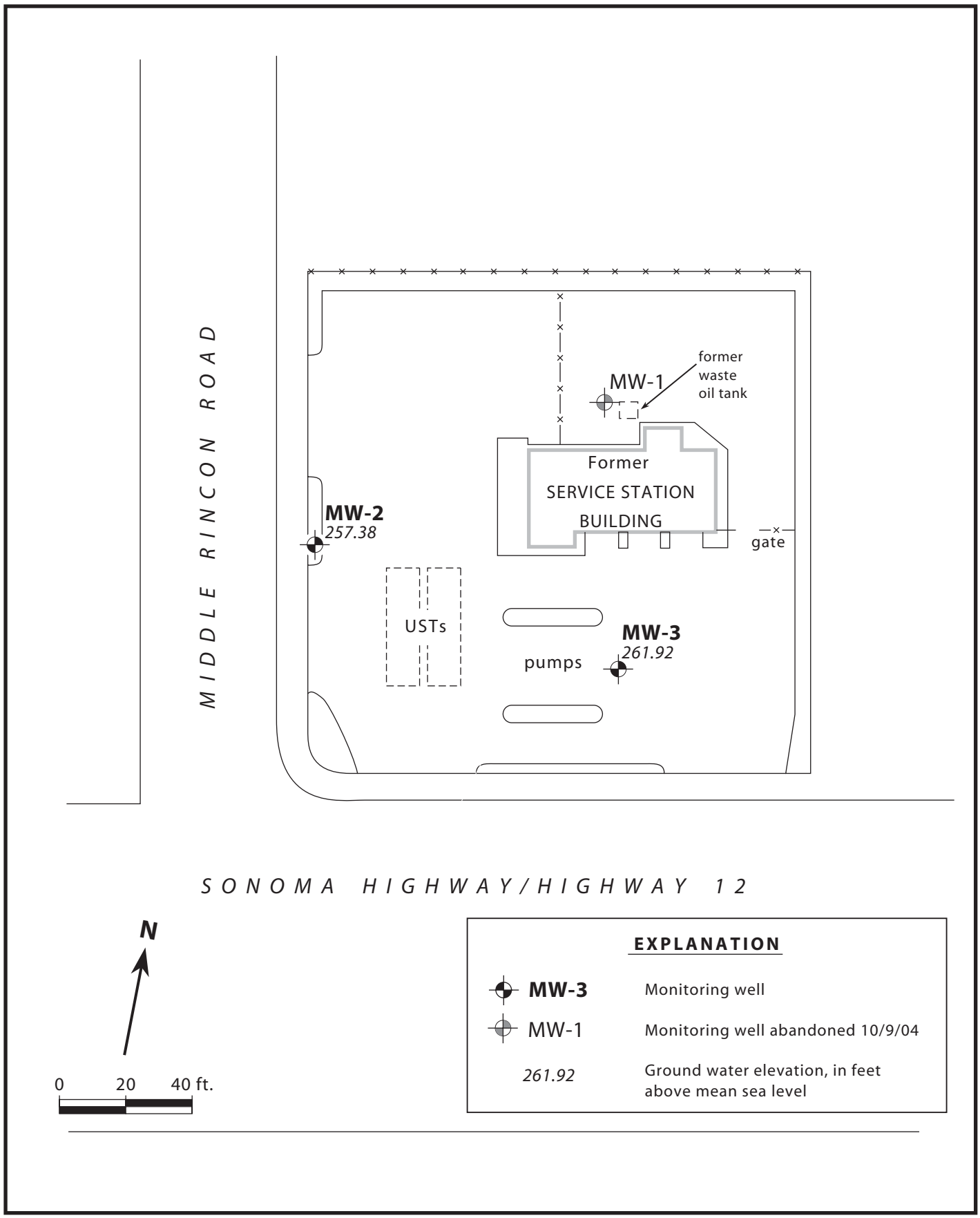


Figure 2. Monitoring Well Locations and Ground Water Elevation Map - April 19, 2005 - Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

98-517-14 [GWE4-05] 5/18/05

APPENDIX B
TABLES

Table 1. Water Level Data and Well Construction Details - Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite Grout Interval	Notes
MW-1	01/30/92	26.20	275.92	249.72	23 - 37	21 - 37	0 - 21	
	04/27/92	23.75		252.17				
	07/31/92	---		---				Monitoring well was inaccessible.
	10/27/92	---		---				Monitoring well was inaccessible.
	02/03/93	---		---				Monitoring well was inaccessible.
	04/28/93	---		---				Monitoring well was inaccessible.
	01/07/94	24.32		251.60				
	04/05/94	23.14		252.78				
	07/21/94	26.11		249.81				
	10/06/94	27.76		248.16				
	04/26/95	20.57		255.35				
	07/06/95	22.37		253.55				
	10/12/95	26.52		249.40				
	01/11/96	23.51		252.41				
	04/03/96	20.10		255.82				
	07/30/96	23.10		252.82				
	10/02/96	23.46		252.46				
	01/24/97	16.81		259.11				
	04/03/97	20.29		255.63				
	07/10/97	22.91		253.01				
	10/30/97	24.38		251.54				
	01/13/98	21.05		254.87				
	05/06/98	---		---				Monitoring well was inaccessible.
	07/01/98	20.46		255.46				
	10/05/98	24.30		251.62				
	04/05/99	16.61		259.31				
	10/07/99	25.48		250.44				
	04/17/00	19.20		256.72				
	10/24/00	26.28	275.93	249.65				Data from November 27, 2000 Earth Engineers report.
	05/25/01	---		---				Monitoring well was inaccessible.
	08/28/01	25.80		250.13				
	10/09/01	26.37		249.56				
	04/11/02	20.88	278.94	258.06				Resurveyed on December 8, 2001
	10/09/02	25.52		253.42				
	04/02/03	20.32		258.62				

Table 1. Water Level Data and Well Construction Details - Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite Grout Interval	Notes
MW-1	10/15/03	24.86	278.94	254.08	23 - 37	21 - 37	0 - 21	
	01/05/04	19.56		259.38				
	04/22/04	20.41		258.53				
	10/06/04	24.94		254.00				Well Abandoned 10/9/04.
MW-2	01/30/92	22.32	274.29	251.97	18 - 33	16 - 33	0 - 16	
	04/27/92	18.68		255.61				
	07/31/92	23.29		251.00				
	10/28/92	27.27		247.02				
	02/03/93	17.87		256.42				
	04/28/93	23.12		251.17				
	01/07/94	20.07		254.22				
	04/05/94	19.33		254.96				
	07/21/94	22.21		252.08				
	10/06/94	24.41		249.88				
	04/26/95	18.89		255.40				
	07/06/95	18.76		255.53				
	10/12/95	23.33		250.96				
	01/11/96	19.59		254.70				
	04/03/96	16.02		258.27				
	07/30/96	18.63		255.66				
	10/02/96	20.91		253.38				
	01/24/97	14.48		259.81				
	04/03/97	17.54		256.75				
	07/10/97	19.61		254.68				
	10/30/97	21.47		252.82				
	01/13/98	16.82		257.47				
	05/06/98	15.21		259.08				
	07/01/98	17.15		257.14				
	10/05/98	21.49		252.80				
	04/05/99	16.20		258.09				
	10/07/99	22.67		251.62				
	04/17/00	17.51		256.78				
	10/24/00	23.90	274.28	250.38				Data from November 27, 2000 Earth Engineers report.
	05/25/01	20.25		254.03				

Table 1. Water Level Data and Well Construction Details - Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite Grout Interval	Notes
MW-2	08/28/01	22.17	274.28	252.11	18 - 33	16 - 33	0 - 16	
	10/09/01	26.10		248.18				
	04/11/02	17.25	277.31	260.06				Resurveyed on December 8, 2001
	10/09/02	23.30		254.01				
	04/02/03	14.75		262.56				
	10/15/03	26.79		250.52				
	01/05/04	15.37		261.94				
	04/22/04	17.19		260.12				
	10/06/04	23.52		253.79				
	04/19/05	**19.93**		**257.38**				
MW-3	01/30/92	29.06	278.62	249.56	25 - 40	23 - 40	0 - 23	
	04/27/92	24.78		253.84				
	07/31/92	29.18		249.44				
	10/28/92	30.90		247.72				
	02/03/93	24.77		253.85				
	04/28/93	17.62		261.00				
	01/07/94	25.85		252.77				
	04/05/94	24.20		254.42				
	07/21/94	25.81		252.81				
	10/06/94	29.86		248.76				
	04/26/95	20.37		258.25				
	07/06/95	22.41		256.21				
	10/12/95	27.92		250.70				
	01/11/96	26.06		252.56				
	04/03/96	22.11		256.51				
	07/30/96	24.44		254.18				
	10/02/96	24.14		254.48				
	01/24/97	21.46		257.16				
	04/03/97	21.09		257.53				
	07/10/97	23.31		255.31				
	10/30/97	24.62		254.00				
	01/13/98	25.00		253.62				
	05/06/98	20.30		258.32				
	07/01/98	21.24		257.38				

Table 1. Water Level Data and Well Construction Details - Redwood Oil Service Station #101, 4925 Sonoma Highway, Santa Rosa, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite Grout Interval	Notes
MW-3	10/05/98	24.82	278.62	253.80	25 - 40	23 - 40	0 - 23	
	04/05/99	19.97		258.65				
	10/07/99	27.41		251.21				
	04/17/00	22.60		256.02				
	10/24/00	29.14		249.48				Data from November 27, 2000 Earth Engineers report.
	05/25/01	24.42		254.20				
	08/28/01	27.61		251.01				
	10/09/01	28.97		249.65				
	04/11/02	25.63	281.65	256.02				Monitoring well re-surveyed on December 8, 2001
	10/09/02	27.35		254.30				
	04/02/03	24.00		257.65				
	10/15/03	22.25		259.40				
	01/05/04	22.47		259.18				
	04/22/04	20.23		261.42				
	10/06/04	26.04		255.61				
	04/19/05	**19.73**		**261.92**				

EXPLANATION:

DTW = Depth to Water
TOC = Top of Casing
GWE = Ground Water Elevation
msl = Measurement referenced relative to mean sea level

Top of casing elevations were surveyed by Ron Miller, Registered Engineer #15816, on February 12, 1992.
Top of casing elevations were re-surveyed by Bradley Thomas, PLS, Windsor Engineering & Land Surveying on June 19, 2000.

Table 2. Analytical Results for Groundwater - Redwood Oil Service Station #101 - 4925 Sonoma Highway, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)/ TPH(G)	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	N	Notes
		<---------- ppb ---------->							
MW-1	01/30/92	<50	1.2	0.6	0.5	0.7	---	---	
	01/30/92	---	5	<5.0	<5.0	10	---	3,800	Sample analyzed for VOCs and Or Pb. Neither was detected. See lab report for detection limits.
	04/27/92	<50	<0.5	<0.5	<0.5	<0.5	---	5,800	
	07/31/92	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	10/27/92	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	02/03/93	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	04/28/93	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	01/07/94	<50	1	1.2	<0.5	0.7	---	6,600	
	07/21/94	<50	<0.5	<0.5	<0.5	<0.5	---	7,200	
	04/26/95	<50	<0.5	<0.5	<0.5	<0.5	---	5,700	
	10/12/95	97	0.7	0.6	<0.5	0.6	---	---	
	04/03/96	90	6	17	3	16	---	30,000	
	10/02/96	<50	<0.5	0.6	<0.5	0.8	<5.0	12,000	
	04/03/97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	7,900	
	10/30/97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	9,800	
	05/06/98	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	10/05/98	<50	<0.5	<0.5	<0.5	<1.0	<1.03	---	
	04/05/99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	
	10/07/99	<50	2.5	<0.5	<0.5	0.7	<0.5	---	
	04/17/00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	
	10/24/00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	This sampling event was performed by Earth Engineers. Data taken from November 27, 2000 Earth Engineers report.
	05/25/01	---	---	---	---	---	---	---	Monitoring well was inaccessible.
	08/28/01	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	Sample analyzed for diesel by EPA Method 8015. The result was 130 ppb.
	10/09/01	58	4.9	4.5	1.7	6.8	<5	---	
	04/11/02	110	10	7.8	2.4	18.8	<5	---	
	10/09/02	66	4.2	3.3	1.6	5	<5	---	
	04/02/03	<50	<0.5	<0.5	<0.5	<1	<1	---	
	10/15/03	<50	<0.5	<0.5	<0.5	<1	1.13	---	
	01/05/04	71	8.5	7.9	1.7	6.4	<1	---	
	04/22/04	190	11	26	3.2	36	13	---	
	10/06/04	<25	<0.5	<0.5	<0.5	<1	<1		

Table 2. Analytical Results for Groundwater - Redwood Oil Service Station #101 - 4925 Sonoma Highway, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)/ TPH(G)	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	N	Notes
		<---------- ppb ---------->							
MW-2	01/30/92	8,800	2,900	3.5	21	24	---	<30	Sample analyzed for VOCs and Or Pb. Neither was detected. See lab report for detection limits
	04/27/92	12,000	410	28	79	21	--	---	
	07/31/92	16,000	4,500	<25	33	49	---	---	
	10/27/92	15,000	7,100	<5.0	26	25	---	---	
	02/03/93	3,100	930	<5.0	18	9.4	---	---	
	04/28/93	7,600	4,200	82	73	80	---	---	
	01/07/94	19,000	7,300	76	220	140	---	<30	
	07/21/94	9,000	1,800	55	130	100	---	<30	
	04/26/95	9,700	4,500	64	130	86	---	<30	
	10/12/95	27,000	6,100	290	680	930	---	---	
	01/30/92	8,800	2,900	3.5	21	24	---	<30	Sample analyzed for VOCs and Or Pb. Neither was detected. See lab report for detection limits
	04/27/92	12,000	410	28	79	21	--	---	
	07/31/92	16,000	4,500	<25	33	49	---	---	
	10/27/92	15,000	7,100	<5.0	26	25	---	---	
	02/03/93	3,100	930	<5.0	18	9.4	---	---	
	04/28/93	7,600	4,200	82	73	80	---	---	
	01/07/94	19,000	7,300	76	220	140	---	<30	
	07/21/94	9,000	1,800	55	130	100	---	<30	
	04/26/95	9,700	4,500	64	130	86	---	<30	
	10/12/95	27,000	6,100	290	680	930	---	---	
	04/03/96	16,000	5,800	150	400	430	---	62	
	10/02/96	20,000	4,900	310	590	600	1,600	30	
	04/03/97	3,100	570	23	83	52	790	49	
	10/30/97	12,000	2,700	98	530	330	1,000	150	
	05/06/98	9,900	1,900	28	280	130	880	<100	
	10/05/98	6,100	98	89	<5.0	96	6203	---	
	04/05/99	220	42	<0.5	11	0.78	24	---	
	10/07/99	3,300	600	15	52	17	870	---	
	04/17/00	4,500	26	46	<0.5	1.8	180	---	
	10/24/00	480	4.4	<0.5	<0.5	<0.5	130	---	Sampling performed by Earth Engineers. Data taken from November 27, 2000 Earth Engineers report. Well was not purged prior to sample

Table 2. Analytical Results for Groundwater - Redwood Oil Service Station #101 - 4925 Sonoma Highway, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)/ TPH(G)	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	N	Notes
		<---------- ppb ---------->							
MW-2	10/24/00	14,000	1,900	48	480	88	680	---	Sampling performed by Earth Engineers. Data taken from November 27, 2000 Earth Engineers report.
	05/25/01	980	82	1	22	13	130	---	
	10/09/01	4,400	630	18	23	53	6.5	---	
	04/11/02	120	8.4	6.9	3.1	19.8	18	---	
	10/09/02	50	6.6	5.6	2.8	9.2	<5	---	
	04/02/03	<50	<0.5	<0.5	<0.5	<1	2.7	---	
	10/15/03	<50	<0.5	<0.5	<0.5	<1	9.6	---	
	01/05/04	84	9.2	9	1.8	7.6	<1	---	
	04/22/04	350	19	46	5.7	69	11	---	
	10/06/04	<25	<0.5	<0.5	<0.5	<1	<1		
	04/19/05	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<1**	**---**	
MW-3	01/30/92	260	4.8	<0.5	<0.5	0.7	---	160	Sample analyzed for VOCs and Or Pb. Neither was detected. See lab report for detection limits
	04/27/92	3,400	220	<0.5	<0.5	8.2	---	270	
	07/31/92	6,500	340	<5.0	<5.0	<5.0	---	---	
	10/28/92	9,900	490	5.1	26	21	---	---	
	02/03/93	3,800	380	27	3.3	9.5	---	---	
	04/28/93	3,200	160	<0.5	<0.5	7	---	---	
	01/07/94	7,800	350	13	13	16	---	200	
	07/21/94	5,100	21	<5.0	<5.0	<5.0	--	<30	
	04/26/95	2,600	280	2.4	<0.5	4.6	---	50	
	10/12/95	2,600	210	9.1	3.2	4.1	---	----	
	04/03/96	2,300	200	24	29	38	---	470	
	10/02/96	5,600	94	1.2	2.8	3.8	<5.0	<30	
	04/03/97	1,900	36	8.2	2.1	10	28	63	
	10/30/97	3,900	54	<2.5	<2.5	<2.5	<25	130	
	05/06/98	3,200	56	<0.5	<0.5	<0.5	5	<100	
	10/05/98	3,700	28	<0.5	<0.5	<1.0	8	---	
	04/05/99	1,900	43	2.2	5	3.3	68	---	
	10/07/99	3,900	65	40	0.6	4.1	120	---	
	04/17/00	4,200	460	19	230	39	400	---	

Table 2. Analytical Results for Groundwater - Redwood Oil Service Station #101 - 4925 Sonoma Highway, Santa Rosa, California

Sample ID	Date Sampled	TPPH (G)/ TPH(G)	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE	N	Notes
		<---------- ppb ---------->							
MW-3	10/24/00	5,100	14	<0.5	<0.5	<0.5	12	---	Sampling performed by Earth Engineers. Data taken from November 27, 2000 Earth Engineers report. Well was not purged prior to sample.
	10/24/00	4,600	13	<0.5	<0.5	<0.5	11	---	Sampling performed by Earth Engineers. Data taken from November 27, 2000 Earth Engineers report.
	05/25/01	2,600	10	3.5	<0.5	1.8	8.2	---	
	10/09/01	1,300	39	6.3	3	7.2	<5	---	
	04/11/02	280	11	8.1	2.5	18.6	<5	---	
	10/09/02	55	4.7	3.7	1.8	5.8	<5	---	
	04/02/03	68	<0.5	<0.5	<0.5	<1	<1	---	
	10/15/03	830	9.2	<1	<1	<2	1.3	---	
	01/05/04	1,000	13	25	7.6	24	<1	---	
	04/22/04	1,100	10	20	2.6	28	10	---	
	10/06/04	60	<0.5	<0.5	<0.5	<1	<1		
	04/19/05	**81**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<1**	**---**	
Orchard	10/24/00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	
DW-62MRR	12/03/01	<50	<0.5	<0.5	<0.5	<0.5	<5	—	
DW Rincon	10/24/00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	
feed	12/03/01	<50	<0.5	<0.5	<0.5	<0.5	<5	---	

EXPLANATION:

TPH(G) = Total Petroleum Hydrocarbons as Gasoline
MTBE = Methyl t-butyl ether
N = Nitrate as N
VOC = Volatile organic compound
OL= Organic Lead
DW-62 MRR = Domestic well located at 62 Middle Rincon Road, approximately 150 ft north of the site.
DW-Rincon feed = Water supply well located at Carter's Rincon Valley Feeds. Well is located approximately 100 ft west and 100 ft north of the site.
"Orchard well" is located approximately 325 ft west and 150 ft north of the site. It serves two residences located on Sonoma Highway.

APPENDIX C
LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jim Green
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 43241 - 4/26/2005 5:47:17 PM

Order Number: 43241
Project Name: Sonoma Highway
Project Number: 98-517-14

Date Received: 4/20/2005 11:09:39 AM
P.O. Number: 98-517-14

Certificate of Analysis - Final Report

On April 20, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following class of analyses are included:

Matrix	Test	Comments
Liquid	8260Petroleum Gas/BTEX	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project Number: 98-517-14
Project Name: Sonoma Highway
Date Received: 4/20/2005
P.O. Number: 98-517-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43241-001 **Sample ID: MW-2** **Matrix:** Liquid **Sample Date:** 4/19/2005 12:10 PM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	04/21/2005	WGC4050421

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.5	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Toluene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91.0	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	04/20/2005	WMS1050420
tert-Butyl Ethyl Ether	ND		1	5	µg/L	N/A	N/A	04/20/2005	WMS1050420
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	04/20/2005	WMS1050420
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	04/20/2005	WMS1050420
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	04/20/2005	WMS1050420

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.1	75 - 125
Dibromofluoromethane	116	75 - 125
Toluene-d8	104	75 - 125

Analyzed by: Xbian
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Project Number: 98-517-14
Project Name: Sonoma Highway
Date Received: 4/20/2005
P.O. Number: 98-517-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43241-002 **Sample ID: MW-3** **Matrix:** Liquid **Sample Date:** 4/19/2005 12:45 PM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	81		1	50	µg/L	N/A	N/A	04/21/2005	WGC4050421

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.8	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Toluene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	04/21/2005	WGC4050421

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.5	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	04/21/2005	WMS1050421
tert-Butyl Ethyl Ether	ND		1	5	µg/L	N/A	N/A	04/21/2005	WMS1050421
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	04/21/2005	WMS1050421
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	04/21/2005	WMS1050421
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	04/21/2005	WMS1050421

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.2	75 - 125
Dibromofluoromethane	105	75 - 125
Toluene-d8	104	75 - 125

Analyzed by: Xbian
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

QC Batch ID: WGC4050421

Reviewed by: MTU - 04/25/05

QC Batch ID Analysis Date: 4/21/2005

Method Blank **Method: EPA 8020**

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**98.7**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Reviewed by: MTU - 04/25/05

QC Batch ID: WGC4050421

QC Batch ID Analysis Date: 4/21/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**96.9**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/25/05

QC BatchID: WGC4050421

Analysis Date: 4/21/2005

Method: EPA 8015 MOD. (Purgeable) — **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250	250	**102**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**101**	65 - 135

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250	240	**97.2**	**4.7**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.1**	65 - 135

Method: EPA 8020 — **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.06	8.0	8.0	**99.8**			65 - 135
Ethyl Benzene	<0.04	8.0	7.6	**95.3**			65 - 135
Toluene	<0.08	8.0	8.0	**99.4**			65 - 135
Xylenes, total	<0.2	24	23	**97.5**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.2**	65 - 135

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.06	8.0	8.3	**103**	**3.3**	25.0	65 - 135
Ethyl Benzene	<0.04	8.0	7.8	**97.1**	**1.9**	25.0	65 - 135
Toluene	<0.08	8.0	8.3	**103**	**4.1**	25.0	65 - 135
Xylenes, total	<0.2	24	24	**100**	**2.5**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.9**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

QC Batch ID: WMS1050420

Reviewed by: MTU - 04/21/05

QC Batch ID Analysis Date: 4/20/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
Diisopropyl Ether	ND	1	5.0	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**94.1**	75 - 125
Dibromofluoromethane	**110**	75 - 125
Toluene-d8	**105**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/21/05

QC BatchID: WMS1050420

Analysis Date: 4/20/2005

Method: EPA 8260B **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	20	**100**			80 - 120
Methyl-t-butyl Ether	<0.3	20	22	**112**			80 - 120
Toluene	<0.2	20	19	**96.5**			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**93.4**	75 - 125
Dibromofluoromethane	**102**	75 - 125
Toluene-d8	**95.8**	75 - 125

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	19	**94.0**	**6.2**	25.0	80 - 120
Methyl-t-butyl Ether	<0.3	20	22	**111**	**0.90**	25.0	80 - 120
Toluene	<0.2	20	18	**90.5**	**6.4**	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94**	75 - 125
Dibromofluoromethane	**102**	75 - 125
Toluene-d8	**96.1**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results
Liquid

QC Batch ID: WMS1050420

Reviewed by: MTU - 04/21/05

QC Batch ID Analysis Date: 4/20/2005

Method EPA 8260B

Conc. Units: µg/L

MS

SampleNumber: 43221-002 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	19.4	4/20/2005	**97.0**			65 - 135
Methyl-t-butyl Ether	ND	20	22.0	4/20/2005	**110**			65 - 135
Toluene	ND	20	19.2	4/20/2005	**96.0**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**90.9**	75 - 125
Dibromofluoromethane	**105**	75 - 125
Toluene-d8	**97**	75 - 125

MSD

SampleNumber: 43221-002 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	18.5	4/20/2005	**92.5**	**4.7**	25	65 - 135
Methyl-t-butyl Ether	ND	20	21.2	4/20/2005	**106**	**3.7**	25	65 - 135
Toluene	ND	20	18.1	4/20/2005	**90.5**	**5.9**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**92**	75 - 125
Dibromofluoromethane	**103**	75 - 125
Toluene-d8	**97**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Reviewed by: MTU - 04/25/05

QC Batch ID: WMS1050421

QC Batch ID Analysis Date: 4/21/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
Diisopropyl Ether	ND	1	5.0	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**95.2**	75 - 125
Dibromofluoromethane	**106**	75 - 125
Toluene-d8	**104**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/25/05

QC BatchID: WMS1050421

Analysis Date: 4/21/2005

Method: EPA 8260B **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	20	**97.5**			80 - 120
Methyl-t-butyl Ether	<0.3	20	21	**105**			80 - 120
Toluene	<0.2	20	19	**94.0**			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**91.9**	75 - 125
Dibromofluoromethane	**100**	75 - 125
Toluene-d8	**94.8**	75 - 125

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	19	**95.0**	**2.6**	25.0	80 - 120
Methyl-t-butyl Ether	<0.3	20	22	**108**	**2.8**	25.0	80 - 120
Toluene	<0.2	20	18	**92.0**	**2.2**	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**93.6**	75 - 125
Dibromofluoromethane	**98.9**	75 - 125
Toluene-d8	**95**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results
Liquid

QC Batch ID: WMS1050421

Reviewed by: MTU - 04/25/05

QC Batch ID Analysis Date: 4/21/2005

Method EPA 8260B

Conc. Units: µg/L

MS

SampleNumber: 43258-002 **Parameter**	**Sample Result**	**Spike Amount**	**Spike Result**	**Analysis Date**	**% Recovery**	**RPD**	**RPD Limits**	**Recovery Limits**
Benzene	ND	20	20.0	4/21/2005	**100**			65 - 135
Methyl-t-butyl Ether	ND	20	22.4	4/21/2005	**112**			65 - 135
Toluene	ND	20	19.1	4/21/2005	**95.5**			65 - 135

Surrogate	**% Recovery**	**Control Limits**
4-Bromofluorobenzene	**90.1**	75 - 125
Dibromofluoromethane	**106**	75 - 125
Toluene-d8	**96.1**	75 - 125

MSD

SampleNumber: 43258-002 **Parameter**	**Sample Result**	**Spike Amount**	**Spike Result**	**Analysis Date**	**% Recovery**	**RPD**	**RPD Limits**	**Recovery Limits**
Benzene	ND	20	19.9	4/21/2005	**99.5**	**0.5**	25	65 - 135
Methyl-t-butyl Ether	ND	20	22.7	4/21/2005	**114**	**1.3**	25	65 - 135
Toluene	ND	20	19.5	4/21/2005	**97.5**	**2.1**	25	65 - 135

Surrogate	**% Recovery**	**Control Limits**
4-Bromofluorobenzene	**90.6**	75 - 125
Dibromofluoromethane	**107**	75 - 125
Toluene-d8	**99.2**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara. CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: JIM GREEN	Phone No.: 707-751-0655	Purchase Order No (Reqd).:	Send Invoice to (if Different)	Phone	
Company Name: ECM GROUP	Fax No.: 707-751-0653	Project Number: 98-517-14	Company REDWOOD OIL CO.		
Mailing Address: P.O. Box 802	email:	Project Name: SONOMA HIGHWAY	Billing Address (if Different)		
City: BENICIA	State: CA Zip: 94510	Project Location:	City:	State	Zip

Sampler: MIKE JACKSON
Field Org. Code:
Global ID:

Turn Around Time
- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☐ 4 Day
- ☐ 5 Day
- ☒ Standard (10 Day)

Order ID:

Sampling

Preservative

Client ID:	Field PT	Lab. No.	Date	Time	Matrix	Composite	Grab	Containers	Preservative	Volatile Organics by GCMS: 601/602 ☐ 624 ☐ / 8260B ☐	Fuel Oxygenates by 8260 ☐ 8010 by 8260 ☐	MTBE by 8260B ☐	Pesticides-8081 ☐	PCBs - 8082 ☐	TPH as Gas/BTEX ☐	TPH as Gas/BTEX/MTBE ☐	Base/Neutral/Acid Organics 8270 ☐	Fuel Scan 8270-SIM ☐ PNA ☐	Diesel / Motor Oil ☐ Extractable ☐ Purgeable ☐	pH	CN	TRPH ☐ Oil & Grease ☐	w/ Si-gel Standard Cleanup ☐	w/ Si-gel Column Cleanup ☐	Metals - Circle Below Total ☐ Dissolved ☐	STLC	TTLC	Remarks
MW-2			4/19/05	12:10	W		X	4	HCl		X				X												H3241-001
MW-3			4/19/05	12:45	W		X	4	HCl		X				X												002

Relinquished by:	Received by:	Date:	Time:
		4/20/05	0927
		4/20/05	1050

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☒ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐

Appendix E

Standard Operating Procedures

ECM STANDARD OPERATING PROCEDURE

GROUND WATER SAMPLING

The following describes sampling procedures used by ECM field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed 10%).

Ground water samples are collected from the wells/borings with steam-cleaned or disposable Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4 C with blue ice or ice) for transport under chain-of-custody to the laboratory.

The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the ECM field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.